PCORnet CDC COVID-19 Electronic Healthcare Data Initiative

Bi-Monthly Webinar

October 25, 2021

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Welcome

PCORnet CDC COVID 19 Project, October Update

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October 25, 2021

Agenda

- Query updates and timeline
- Distributed regression queries
- Cumulative query
- Delta Variant query
- Patient-level data
- New data sharing agreement

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Query updates and timeline

- Delta Variant query went out last week
- Next queries – likely order over next few months
  - Creating cohorts from immunization and death tables
  - Chronic disease and severe COVID regression
  - COVID and chronic disease outcomes
  - Admissions/readmissions regression
  - Cumulative query
  - Patient-level data query

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Update on Long COVID regression queries

- Condition and symptom queries completed
- Still ironing out some issues with our meta-analysis package but seems to be resolved
  - First report on conditions query this week
  - 2nd report to follow
- Want to await review of first report before moving forward with 3rd regression query – working on setting up though

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Population Currently Under Surveillance

	COVID +	COVID -	Vaccinated
Adults	762,732	5,155,467	1,165,065
Children	194,215	1,616,945	99,848

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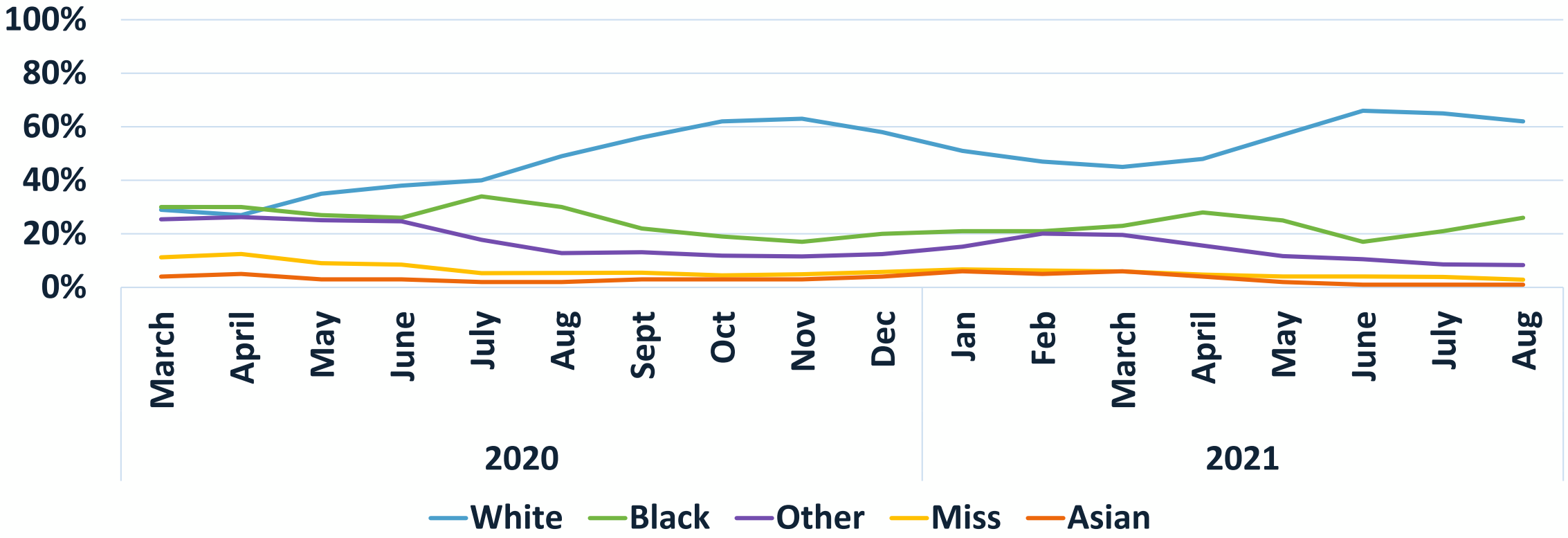
Adults with SARS-CoV-2, by Race, Inpatient



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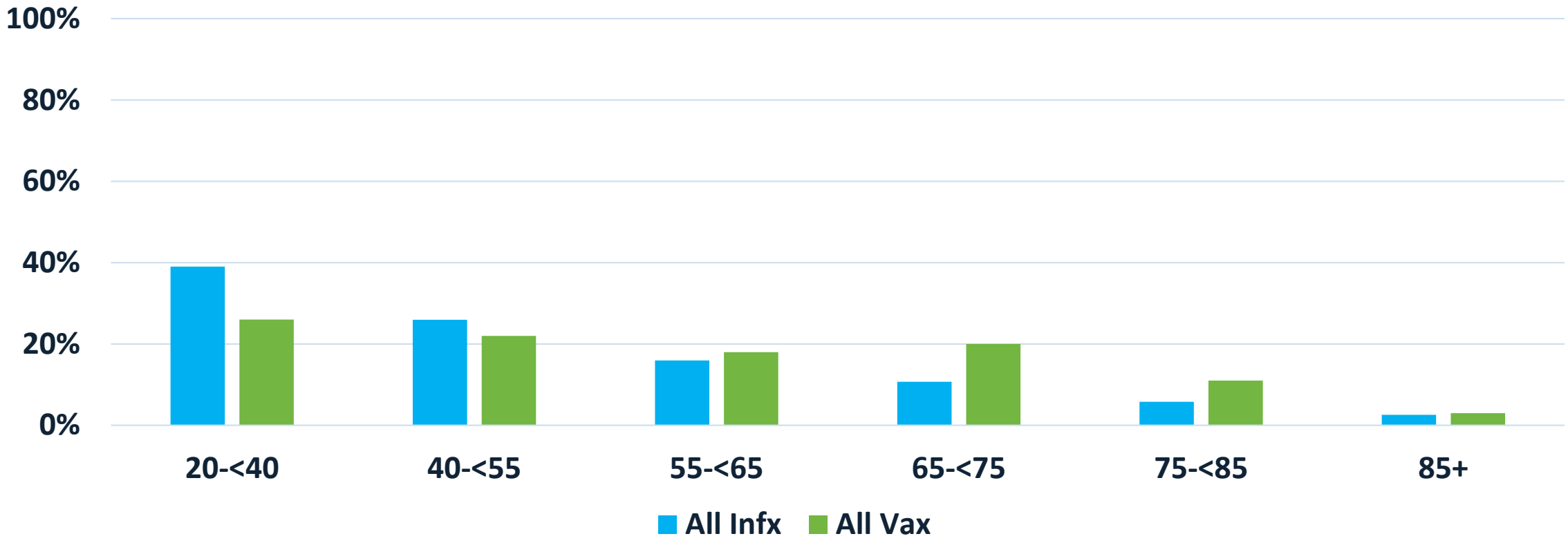
Trends in Vaccinations and Infx, Adults by Age



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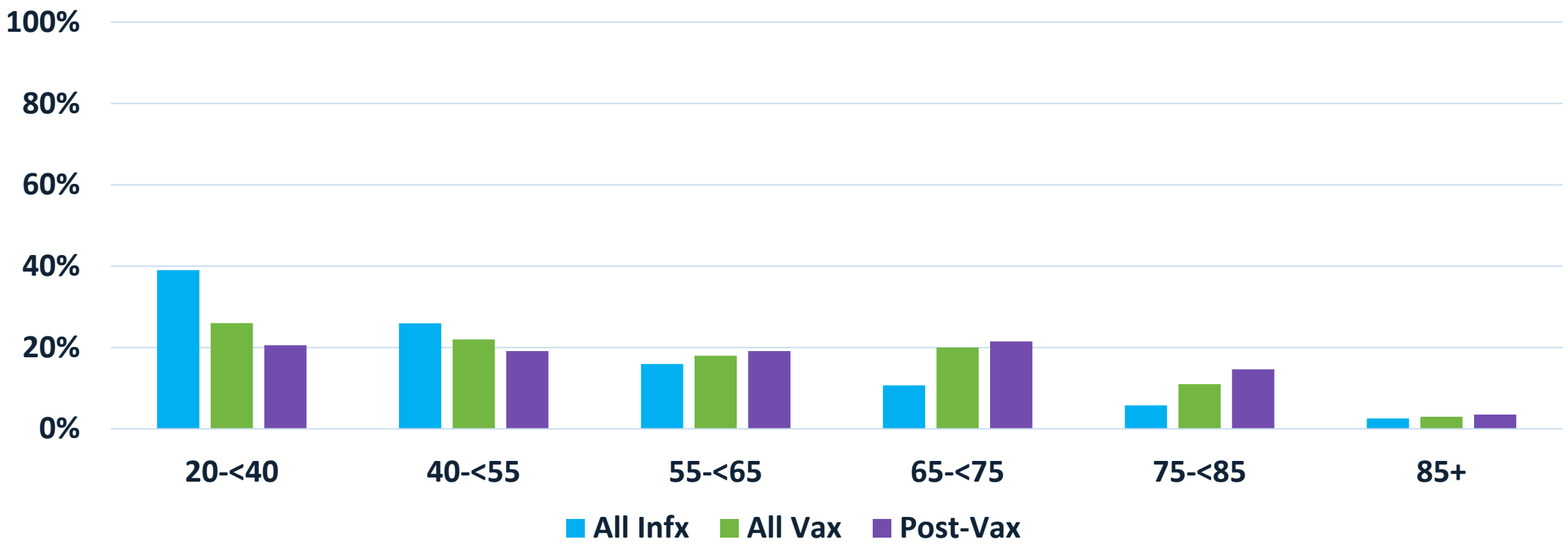

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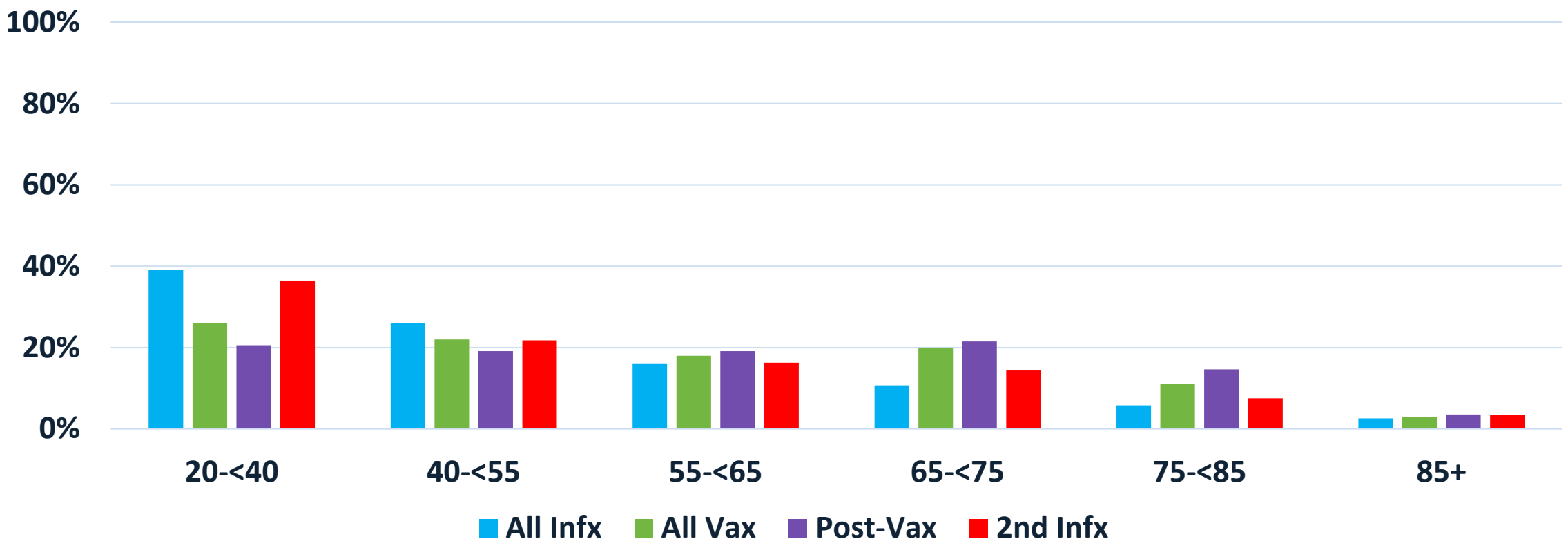

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Delta query

- Examining characteristics across different time periods
  - Early (May – Oct 2020)
  - Winter 2020 surge (November 2020 – Feb 2021)
  - Pre-delta, post vax (March – June 2021)
  - Delta (July 2021– mid-Oct 2021)

- Focus on exploring severity of disease across each time period by care setting, PEDSnet-severity index, NIH severity index

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Severe Disease Index, Any of following -7/+13 days

SEVERE ACUTE

- ARDS or respiratory failure
- Sepsis or shock
- Critical care code, mech vent
- Non-invasive ventilator, hi flow
- Pressor support

SEVERE SEQUELAE

- Encephalopathy, encephalitis, MIS
- myocarditis, pericarditis, thrombosis, MI, embolism
- acute kidney injury, acute hepatic failure, cardiac arrhythmia
- acute viral transverse myelitis, macrophage activation syndrome

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Moderate Disease Index, No Severe + Any of Following

- Bronchitis
- Bronchiolitis
- Pneumonia
- Gastroenteritis, diarrhea, nausea/vomiting
- Guillain Barre
- IVFluids

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NIH Severity Criteria

- Based on having certain characteristics met within 72 hrs of admission
  - Mechanical vent use – Grade 4
  - Non-invasive vent, hi flow O2, critical care – Grade 3
  - Respiratory failure or ARDS – Grade 2
  - All else – Grade 1

- Also, capturing those with inpatient admission, critical care code, mechanical vent separately

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Patient-level data query

- Want to be clear about use cases for this data
- Current planned scope mirrors our distributed regression work:
  - Predictors of developing post-acute sequalae of COVID
  - Chronic disease and COVID
  - Admissions post amb-ED eval/readmission
- Can provide important opportunities to remedy any aberrancies found in distributed regression, esp as going through publication process
- Will only request enough data to allow for these investigations

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Data for patient-level data query

- Will capture information similar to what getting now for SARS-CoV-2 positive patients
  - Demographics and care setting
  - Underlying and co-occurring conditions, treatments
- Need to think about how to capture “controls”
  - Will not capture full population of SARS-CoV-2 negative “controls”
  - Matched or random?

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New Data Security Agreement

- Harvard Pilgrim will not be part of the PCORnet Coordinating Center starting in early 2022
- Will remain engaged in PCORnet activities & project-focused query fulfillment work, including with this project
- Will move forward with new DSA between sites and Harvard Pilgrim to ensure smooth transition of agreements
  - Bilateral agreements with sites and Harvard Pilgrim
  - Language nearly identical to original

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Summary

- Query timelines as expected with some adjustments to fit in emerging areas of focus
- Distributed regression work a bit delayed, coming along
- Modular programs with new functionality to comprehensively assess vaccine and mortality data
- Patient-level data work coming into focus with more once details clarified
- New DSA to facilitate data transfer

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Questions?